BluSDR-90-B

BluSDR™ 10W Radio Module

A CODAN COMPANY

Overview:

As part of the DTC BluSDR™ family of products, BluSDR-90-B is designed for either mobile or fixed site applications, particularly suitable for drone platforms operating in long range applications up to 90km.

Based around DTC's SDR (software defined radio) architecture and offering a full 10W of output power, BluSDR-90-B includes MANET IP Mesh capability to allow up to 144 nodes in a self-healing network using DTC's industry leading MeshUltra-X™ waveform.

BluSDR-90-B includes a rich set of interface options including Ethernet, USB, serial data, built in GPS receiver, audio and HD-SDI video inputs.

Features and Benefits:

- 10W total output power (2x5W COFDM transceivers)
- Ideal for long range applications up to 90km
- Rugged IP66 design for environmental resistance
- MeshUltra™ MANET waveforms included to support up to 144 nodes in a self forming self healing Mesh network
- Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- USB support for peripherals such as 3G/4G/Wi-Fi dongles
- RNDIS support for Ethernet over USB
- Data capacity up to 90Mbps in 20MHz channel bandwidth
- Built-in video encoders
- Built-in GPS receiver
- Interlink mode for enhanced capability and large scale systems
- 64GB built-in storage

Product Information:

Product Codes

BluSDR-90-120170-B	BluSDR-90 Boxed 2x5W (10W), 1.20-1.70GHz
BluSDR-90-165230-B	BluSDR-90 Boxed 2x5W (10W), 1.65-2.30GHz
BluSDR-90-198255-B	BluSDR-90 Boxed 2x5W (10W), 1.98-2.55GHz
BluSDR-90-440500-B	BluSDR-90 Boxed 2x5W (10W), 4.40-5.00GHz

Product Includes

CA3229	Screened power/Ethernet cable
CA3256	Short bananas to XLR power cable

Accessory Options (sold separately)

AP000481	UK IEC power supply cable for use with CA0649
AP001483	US IEC power supply cable for use with CA0649
AP004634	EU IEC power supply cable for use with CA0649
AP007192	AU IEC power supply cable for use with CA0649
AP009259	IP55 water resistant enclosure for use with CA0649
AP009562	Antenna GPS/GLONASS, 1.575-1.6GHz, SMA
CA0649	12VDC power supply unit for use with CA3229
CA2585	Mic/head and control/debug screened cable
CA3254	XLR to XLR extension 5m for use with CA3229
CA3255	XLR to XLR extension 10m for use with CA3229
CA3606	Mic/head and RS232/RS485 data cable
NETR-5W-MB	Mounting bracket and antenna spacers
SOL8SDI	HDMI or composite video to SDI converter

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Technical Specification:

Interfaces

COFDM RF interfaces	N-Type (f) x 4 (2 x Tx/Rx, 2 x Rx)
GPS antenna interface	SMA (f) 50Ω
Power and Ethernet (Eth0)	6-way Amphenol 38999 series 3
Ethernet (Eth1)	RJ45
Config/data/audio	22-way Amphenol 38999 series 3
SDI/HD-SDI video	BNC (f) 75Ω
USB	Type A

COFDM Transceivers

RF power	5W (37dB) per output, 10W total
Power step	0.25dB incremental control
Tuning step	125kHz step
Bandwidth	1.25/1.5/1.75/2.5/3.0/3.5/4.0/5.0MHz (MeshUltra-M/-80/-X) 6.0/7.0/8.0/10.0/12.0/14.0/16.0/20.0MHz (MeshUltra-M/-80)
Mesh capacity	87Mbps MeshUltra
Carrier modulation	BPSK/QPSK/16QAM/64QAM (adaptive)
FEC rate	FEC1/2, FEC2/3 (adaptive)
Receive sensitivity	-98dBm (BW 2.5MHz/QPSK 1/2)

Video

SDI input formats	1920x1080i 60/59.94/50Hz 1920x1080p 30/29.97/25/24/23.97Hz 1920x1080psf 30/29.97/25/24/23.97Hz 1280x720p 60/59.94/50Hz 720x576i 50Hz or 720x480i 59.94Hz
H.264 compression	AVC / H.264 / MPEG-4 Part 10 High profile level 4.0
Coding options	Horizontal scaling of 3/4, 2/3, 1/2, 1/4 Vertical scaling of 1/2, 1/4 Sub-frame rate of 1/2, 1/4, 1/8, 1/24
Encoder delay	1s to 10ms (mode dependent)
Encoder bitrates	0.25Mbps to 32Mbps

Audio

Digital audio input	SD/HD-SDI digital stereo pair
Sample rate	16kHz-48kHz
Coding modes	4 channels stereo or mono MPEG Audio Layer 1 64-448kbps MPEG Audio Layer 2 32-384kbps MPEG Audio Layer 3 8-256kbps
Talkback audio input	Microphone level/headphone output
Compression	G726 32kbit audio 8kHz sampling and mute
Input level (600Ω impedance)	0.25mV to 1.14V RMS
Output level	32mW RMS max into a 16Ω load

Data Interface

RS232/RS485 bi-directional data (shared with user camera control)	1k2 to 115k2 baud switchable with UDP and TCP routing protocol

Encryption

Standard	DES
Licensed	AES128/256 (subject to export control)

Power

DC input	10-18V
Power consumed	32W RMS @13V 25% data occupancy 65W RMS @13V 100% data occupancy
Inrush current (power up)	50A @13V
Inrush current (TX cycle)	10A @13V

Physical

Dimensions	H 160mm, W 160mm, D 70mm
Weight	2.5kg approx.

Environment

Sealing	IP66 minimum
Temperature range	-20°C to +50°C

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Technical Specification (cont.):

License Options

Includes DTC MeshUltra™ MANET Mesh capability as standard. See MeshUltra family brochure for more details.

BluSDR-IAS	Interference Avoidance Scheme for Mesh
BluSDR-LOWBIT	Low Bitrate Video Encoding
†BLUSDR-P2MP	Point-to-Multipoint System for Mesh
BluSDR-RANGING	Ranging Measurements for BluSDR Radios
BluSDR-SNAPSHOTS	Triggered JPEGs with Associated Timestamps
#AES128	AES128 Cryptography Licence
#AES256	AES256 & AES128 Cryptography Licence

Accredited to FIPS140-2 for MeshUltra™ waveforms

† Enables split frequency TX/RX operation for special applications. Contact DTC for more information.

Encrypted products are subject to regulatory export controls

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email solent.info@domotactical.com

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